# Commonwealth of Kentucky
# Division for Air Quality

## PERMIT APPLICATION SUMMARY FORM

Completed by: Durga Patil

GENERAL INFORMATION:

| | |
|---|---|
| Name: | Equitable Gathering, LLC |
| Address: | 126 Monument Drive<br>Dwale, Floyd, KY 41621 |
| Date application received: | 07/16/2008 |
| SIC Code/SIC description: | 1311, Crude Petroleum and Natural Gas |
| Source ID: | 21-071-00138 |
| Agency Interest: | 44058 |
| Activity: | APE20080003 |
| Permit: | V-08-015 R1 |

APPLICATION TYPE/PERMIT ACTIVITY:

| | |
|---|---|
| [ ] Initial issuance | [ ] General permit |
| [x] Permit modification | [ ] Conditional major |
| __Administrative | [x] Title V |
| __Minor | [x] Synthetic minor |
| _x_Significant | [ ] Operating |
| [ ] Permit renewal | [x] Construction/operating |

COMPLIANCE SUMMARY:

[ ] Source is out of compliance [ ] Compliance schedule included

[x] Compliance certification signed

APPLICABLE REQUIREMENTS LIST:

| | | |
|---|---|---|
| [ ] NSR | [ ] NSPS | [x] SIP |
| [ ] PSD | [x] NESHAPS | [ ] Other |
| [ ] Netted out of PSD/NSR | [x] Not major modification per 401 KAR 51:001, 1(116)(b) | |

MISCELLANEOUS:

[ ] Acid rain source

[ ] Source subject to 112(r)

[x] Source applied for federally enforceable emissions cap

[ ] Source provided terms for alternative operating scenarios

[x] Source subject to a MACT standard

[ ] Source requested case-by-case 112(g) or (j) determination

[ ] Application proposes new control technology

[x] Certified by responsible official

[x] Diagrams or drawings included

[ ] Confidential business information (CBI) submitted in application

[ ] Pollution Prevention Measures

[ ] Area is non-attainment (list pollutants):

EMISSIONS SUMMARY:

| Pollutant | 2007 actual emissions (tpy) | Modified facility potential emissions (tpy) |
|---|---|---|
| $PM/PM_{10}$ | 3.6 | 0.09 |
| $SO_2$ | 0.05 | 0.10 |
| NOx | 598.84 | 470.8 |
| CO | 59.91 | 37.3 |
| VOC | 7.2 | 67.23 |
| Single HAPs<br>Acetaldehyde<br>Acrolein<br>Benzene<br>Ethylbenzene<br>Formaldehyde<br>Methanol<br>n-Hexane<br>Toluene<br>Xylene | <br>0.7<br>0.13<br>0.57<br>0.03<br>Not listed<br>Not listed<br>1.24<br>0.36<br>0.13 | <9 |
| Source wide HAPs | 3.2 | <22.5 |

SOURCE DESCRIPTION:

Natural gas enters the station via a distribution pipeline system and is first compressed using two (2) natural gas-fired compressors, identified as Units #1 and #2. The compressed natural gas stream is then processed through the existing TEG dehydration unit (U03). The dehydration unit filters the natural gas and separates excess water using a distillation process in which heat is provided to the dehydration unit column by a natural gas-fired reboiler, rated at 1.25 mmBtu/hr. The natural gas stream from the dehydration unit is then reintroduced into the pipeline to be transported further along the distribution system. Liquid fractions removed from the natural gas via dehydration are stored in small storage tanks at the station. The facility also has one temporary natural gas-fired compressor (U05) of capacity 1,265 brake horsepower (bhp), one temporary triethylene glycol (TEG-U06) dehydration unit operating at a maximum of 10 million standard cubic feet per day; with an associated reboiler (U07) of capacity 0.275 million British thermal units per hour (mmBtu/hr). To show compliance with volatile organic compounds (VOC) and nitrogen oxides ($NO_x$) emission limits to preclude the applicability of prevention of significant deterioration of air quality (PSD) regulations for a significant net emissions increase, permit V-08-015 stipulated that the permittee will not operate these units longer than 945 hours and shall keep records of operating hours for the temporary units. The facility will also remove from operation the temporary dehydrator before start-up of the new permanent dehydrator.

## PROPOSED MODIFICATIONS IN V-08-015 R1:

The proposed modifications at the facility will consist of the continued operation of the temporary natural gas-fired compressor (U05) of capacity 1,265 brake horsepower (bhp) with no restriction on the hours of operation; and the construction and operation of one triethylene glycol (TEG) dehydration unit (U08) controlled with a flare operating at a maximum of 37.5 million standard cubic feet per day, with an associated reboiler (U09) of capacity 1.0 million British thermal units per hour (mmBtu/hr), one natural gas fired emergency generator (U10) having maximum capacity of 690 horsepower to be operated up to maximum of 500 hours, one 8,820 gallon condensate storage tank and two 4,200 gallon compressor oil storage tanks. The modification will also consist of routing the compressed natural gas stream from compressor U05 (temporary unit identified in V-08-015) to the dehydration unit U03 to remove any excess water in the natural gas. The maximum potential natural gas processing from for this unit will remain at 26 mmscf/day even after the routing. The feed to the new Natco dehydration unit (U08) will be the compressed natural gas from two 3000 hp electrical compressors.

The potential non-fugitive emissions increase of $PM/PM_{10}$, VOC, CO, and $NO_X$ will be 0.035, 19.28, 2.89 and 33.11 tpy, respectively based on the operation of the flare at all times for the new dehydration unit; which is less than the significant emissions increase of 25/10, 40, 100 and 40 tpy for the pollutants respectively to preclude the applicability of PSD requirements.

## EMISSIONS AND OPERATING CAPS DESCRIPTIONS:

The permittee shall comply with source-wide annual individual HAP emission and combined HAPs emissions limitations of 9.0 tons and 22.5 tons per rolling 12-month period.

In order to preclude the applicability of 401 KAR 51:017, for a significant emissions increase of volatile organic compounds (VOC) from the dehydration units and for source wide limits on HAPs, the flare must be operated at all times that the proposed dehydration unit is in operation.

## OPERATIONAL FLEXIBILITY:

None